

VERSIONS AND STATES WITHIN A SINGLE DATABASE

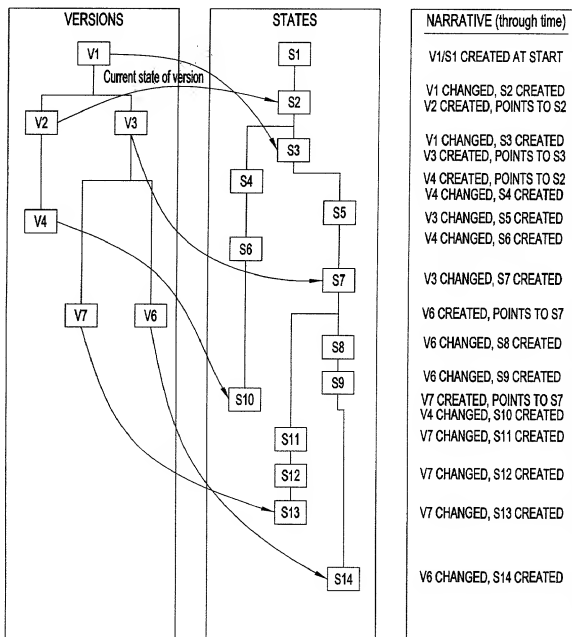
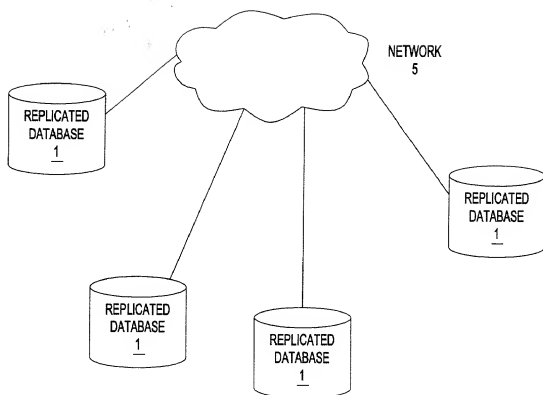


FIG. 1

*FIG. 2*

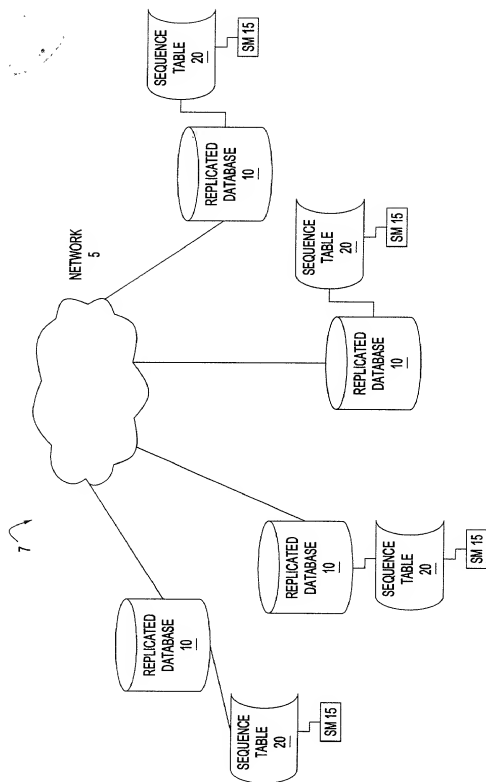


FIG. 3

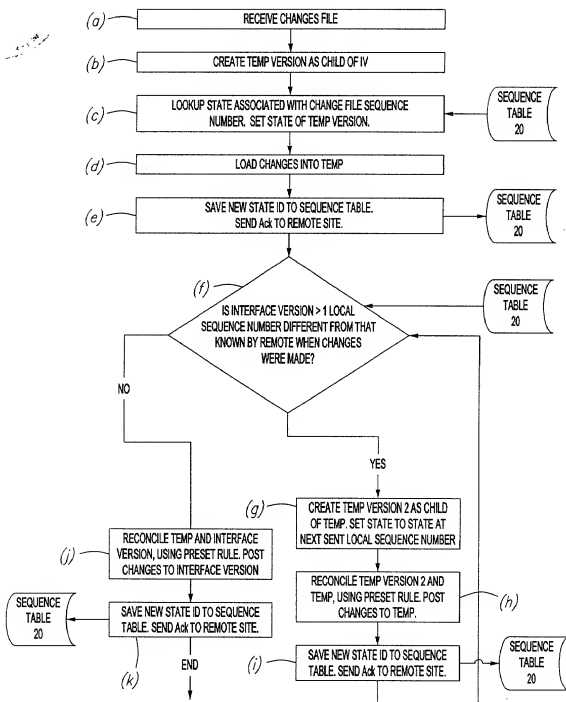


FIG. 4

NUMBER	EVENT	LOCAL SEQ TABLE	VERSIONS & STATES(S)	LOCAL SEQ	REMOTE SEQ	VERSIONS & STATES(S)	REMOTE SEQ TABLE	LOCAL INQ	REMOTE INQ
100	START	A.M.5.34	LIV-61	A	M	RV-34	M.A.34.51		
105	REMOTE MAKES CHANGES, SAVES STATE 35, SENDS CHANGES MARKED N.A. 35, UPDATES SEQ TABLE	A.M.5.34	LIV-61	B	N	RV-35	M.A.34.51 N.A.35.7	CNA.35	
110	LOCAL MAKES CHANGES SAVES STATE 61 SENDS CHANGES MARKED B.M.61, UPDATES SEQ TABLE	A.M.5.34 B.M.61.7	LIV-61	B	N	RV-35	M.A.34.51 N.A.35.7	CNA.101	CB.M.61
115	LOCAL RECEIVES CHANGE FILE A.N.35, CREATES TEMP W/ STATE 51 (by looking up A.N. in seq table) AND IMPORTS, CRE- ATING STATE 65, SENDS A4, A.N.65, UPDATES SEQ TABLE	A.M.5.34 B.M.61.7 A.N.65.35	LIV-61 Temp-65	B	N	RV-35	M.A.34.51 N.A.35.7		CB.M.61 AA.N.65
120									
125	LOCAL RECONCILES TEMP WITH LIV, RESOLVING ANY CONFLICTS USING STANDARD RULES, CREATES STATE 66, CORRESPONDING TO B.N.	A.M.5.34 B.M.61.7 A.N.65.35	LIV-61 Temp-66	B	N	RV-35	M.A.34.51 N.A.35.7		CB.M.61 AA.N.65
130	LOCAL POSTS TO LIV, SENDS A4 B.N.66, UPDATES SEQ TABLE IF THERE WERE CONFLICTS, THEN PARKS VERSIONS POINT- ING TO STATES 61 AND 65, TO ALLOW REPLAY OF RECONCILE BY HUMAN AGENT	A.M.5.34 B.M.61.7 A.N.65.35 B.N.66.7	LIV-66 Parked-61 Parked-65	B	N	RV-35	M.A.34.51 N.A.35.7		CB.M.61 AA.N.65 AB.N.66

FIG. 5A

135	REMOTE NAMES CHANGES, SAVES STATE & SENDS CHANGES MARKED O.A. 38, UPDATES SEQ TABLE	AM.51.34 BM.61? AN.65.35 BN.66.?	LV-66 Period-61 Period-65	B	O	RV-36	MA.34.51 NA.35? OA.36?	COA.36	CBM.61? AAN.65 ABN.66
140	REMOTE RECEIVES BM.61 CREATES TEMP AT STATE 34 (by looking up AM in seq table) AND IMPORTS CREATING STATE 40. SENDS AAN.61.40, UPDATES SEQ TABLE	AM.51.34 BM.61? AN.65.35 BN.66.?	LV-66 Period-61 Period-65	B	O	RV-36 Temp-40	MA.34.51 NA.35? OA.36? MB.40.61	COA.36 AMB.40	AAN.65 ABN.66
145	TOO MANY STEPS BETWEEN W AND O TO RECONCILE DIRECT. LV. REMOTE CREATES Temp2, SETS TO STATE 35 (local sequence N)	AM.51.34 BM.61? AN.65.35 BN.66.?	LV-66 Period-61 Period-65	B	O	RV-36 Temp-40 Temp-35	MA.34.51 NA.35? OA.36? MB.40.61	COA.36 AMB.40	AAN.65 ABN.66
155	REMOTE RECONCILES TEMP WITH Temp2, APPLYING CONFLICT RULES, CREATING NEW STATE 41	AM.51.34 BM.61? AN.65.35 BN.66.?	LV-66 Period-61 Period-65	B	O	RV-36 Temp-40 Temp-41	MA.34.51 NA.35? OA.36? MB.40.61	COA.36 AMB.40	AAN.65 ABN.66
160	REMOTE POSTS TO TEMP. SENDS AAN.61.41, UPDATES SEQ TABLE, DELETES Temp2 IF NO CONFLICTS DURING RECONCILE	AM.51.34 BM.61? AN.65.35 BN.66.?	LV-66 Period-61 Period-65	B	O	RV-36 Temp-41	MA.34.51 NA.35? OA.36? MB.40.61 NB.41.?	COA.36 AMB.40 AN.6.41	AAN.65 ABN.66
165	RY NOW REFERENCES AO, TEMP REFERENCES BN, ONLY ONE STEP ON EITHER SIDE SO ALLOWED TO RECONCILE. REMOTE RECONCILES TEMP WITH RV, CREATING STATE 42.	AM.51.34 BM.61? AN.65.35 BN.66.?	LV-66 Period-61 Period-65	B	O	RV-36 Temp-42	MA.34.51 NA.35? OA.36? MB.40.61 NB.41.?	COA.36 AMB.40 AN.6.41	AAN.65 ABN.66

FIG. 5B

REMOTE POSTS TO RV; SENDS A4/O.B.42 UPDATES SEQ TABLE, DELETES TEMP IF NO CONFLICTS DURING RECONCILE	A.M.51.34 B.M.61.7 A.N.65.35 B.N.66.7	LV-66 Period-61 Period-65	B	0	RV-42	MA.34.51 NA.35.7 OA.36.7 MB.40.61 NB.41.2 OB.42.7	COA.36 AMB.40 ANB.41 AOB.42	ANA.65 ABN.66
REMOTE RECEIVES A4B5 AND B4B6 UPDATES SEQ TABLE	A.M.51.34 B.M.61.7 A.N.65.35 B.N.66.7	LV-66 Period-61 Period-65	B	0	RV-42	MA.34.51 NA.35.65 OA.36.7 MB.40.61 NB.41.66 OB.42.7	COA.36 AMB.40 ANB.41 AOB.42	
LOCAL RECEIVES CHANGE FILE A.O.36, CREATES TEMP WITH STATE 65 (by looking up A.N. seq table) AND IMPORTS, CREATING STATE 70, SENDS A4/A.O.70, UPDATES SEQ TABLE.	A.M.51.34 B.M.61.7 A.N.65.35 B.N.66.7 A.O.70.36	LV-66 Period-61 Period-65 Temp-70	B	0	RV-42	MA.34.51 NA.35.65 OA.36.7 MB.40.61 NB.41.66 OB.42.7	AMB.40 ANB.41 AOB.42	AAO.70
LOCAL RECONCILES TEMP WITH LV, RESOLVING ANY CONFLICTS USING STANDARD RULES, CREATES STATE 71, CORRESPONDING TO B.O.	A.M.51.34 B.M.61.7 A.N.65.35 B.N.66.7 A.O.70.36	LV-66 Period-61 Period-65 Temp-71	B	0	RV-42	MA.34.51 NA.35.65 OA.36.7 MB.40.61 NB.41.66 OB.42.7	AMB.40 ANB.41 AOB.42	AAO.70
LOCAL POSTS TO LV, SENDS A4/B.O.71, UPDATES SEQ TABLE DELETES TEMP IF NO CONFLICTS.	A.M.51.34 B.M.61.7 A.N.65.35 B.N.66.7 A.O.70.36 B.O.71.7	LV-71 Period-61 Period-65	B	0	RV-42	MA.34.51 NA.35.65 OA.36.7 MB.40.61 NB.41.66 OB.42.7	AMB.40 ANB.41 AOB.42	AAO.70 ABO.71

FIG. 5C

LOCAL RECEIVES A&A FILES NB40, NB41, OB42, UPDATES SEC TABLE	AM5,34 BM6,40 AN6,35 BN6,41 AO,70,36 BO,71,42	LV-71 Period-61 Period-65	B	0	RV-42	MA,34,51 NA,35,65 OA,36,7 MB,40,61 NB,41,66 OB,42,7	AMB,40 ANB,41 AOB,42	AAO,70 ABO,71
REMOTE RECEIVES A&A FILES AO70, BO71, UPDATES SEC TABLE	AM5,34 BM6,40 AN6,35 BN6,41 AO,70,36 BO,71,42	LV-71 Period-61 Period-65	B	0	RV-42	MA,34,51 NA,35,65 OA,36,70 MB,40,61 NB,41,66 OB,42,71		

FIG. 5D

VERSIONS AND STATES, 2 DATABASES, PART 1

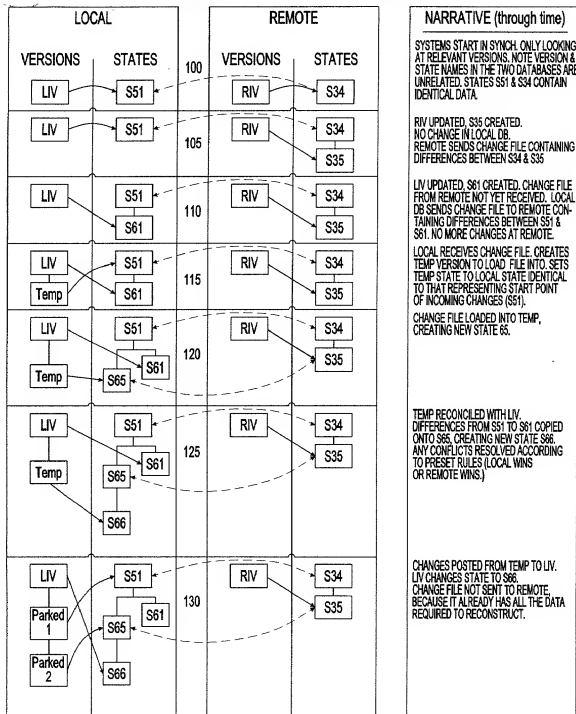


FIG. 6A

VERSIONS AND STATES, 2 DATABASES, PART 2

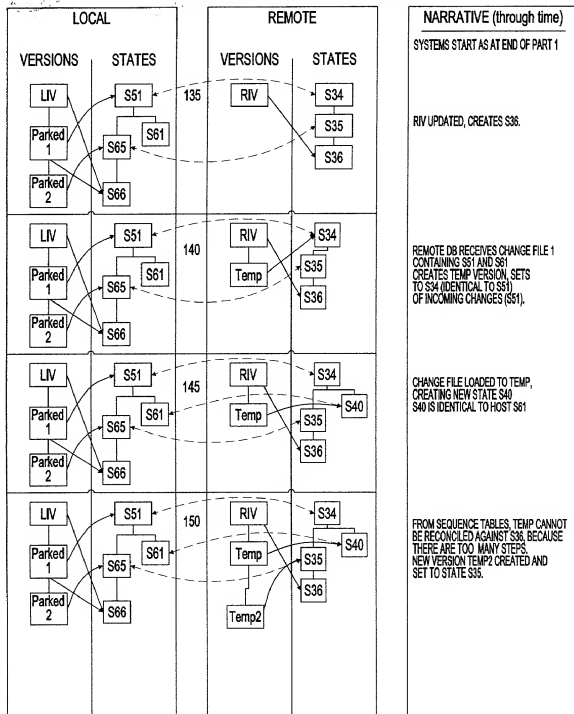


FIG. 6B

VERSIONS AND STATES, 2 DATABASES, PART 3

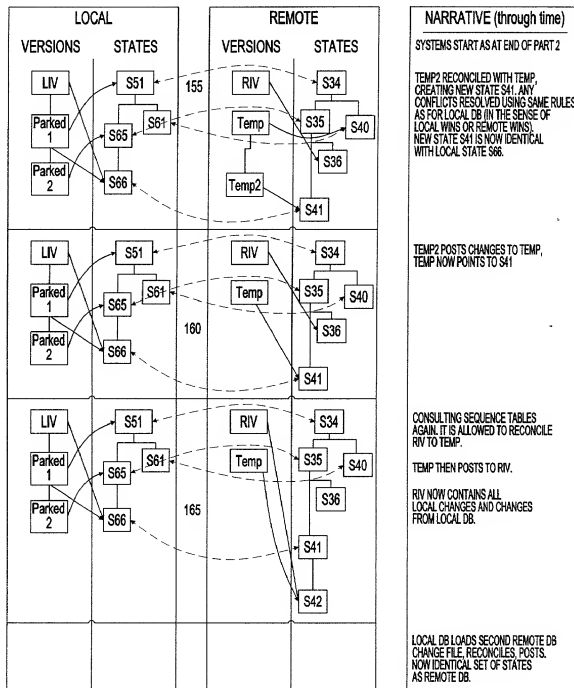


FIG. 6C